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Keating Dental Arts, Inc.
7

8 IN THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA
9 SOUTHERN DIVISION
10

11 JAMES R. GLIDEWELL DENTAL
CERAMICS, INC. dba
12 GLIDEWELL LABORATORIES,

13 Plaintiff/Counter-defendant,
v.

14 KEATING DENTAL ARTS, INC.

15 Defendant/Counter-Plaintiff.
16
17

) Civil Action No.
SACV11-01309-DOC(ANx)

) **EXPERT REPORT OF DR. DAVID
W. EGGLESTON**

) Honorable David O. Carter, USDJ
Honorable Arthur Nakazato, USMJ
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3 **I. STATEMENT OF WORK**

4 In August 2012 I was contacted by Knobbe, Martens, Olson & Bear,
5 counsel for Keating Dental Arts, Inc., to provide my perspective on the use of
6 “bruxer,” “bruxism,” “bruxzir” and similar terms within the dental industry.
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8 **II. STATEMENT OF QUALIFICATIONS**

9 I graduated from the University of Southern California (USC) School of
10 Dentistry in 1970 receiving the Daniel Cave Memorial Award and the Lewis E.
11 Ford Memorial Award for achievements in prosthodontics. Additionally, I was
12 elected to the ATE and OKU honorary dental fraternities.

13 After graduation, I continued at the USC School of Dentistry with a
14 residency in the specialty of prosthodontics, and received my Prosthodontics
15 Certification in 1972 and the American Board of Prosthodontics Certification in
16 1975. After completing my residency at USC, I practiced prosthodontics at
17 Bolling Air Force Base in Washington, D.C., achieving the rank of Major.

18 Currently, I am on the faculty at the Ostrow School of Dentistry of USC as
19 a Clinical Associate Professor and I serve as a member of the Board of
20 Councilors. I lecture extensively throughout the United States and have given
21 dental courses in Canada, Mexico, Europe, the South Pacific and the Middle East.

22 I am active in many dental organizations and have served in the following
23 capacities: President of the American Board of Prosthodontics, President of the
24 American College of Prosthodontists, President of the Academy of
25 Prosthodontics, President of the Pacific Coast Society for Prosthodontics,
26 President of the ACP Education Foundation, and President of the ACP California
27 Section; Associate Editor of the *Journal of Prosthodontics*; Chair of the ACP
28 Prosthetic Dental Care Programs; Chair of the ACP National Peer Review

Committee; Consultant for the ADA Council on Scientific Affairs; Chair of the California Dental Association Council on Dental Research; Chair of the USC Dentistry Associates Board of Directors; Executive Councilor and Chair of the Program Committee for the Academy of Fixed Prosthodontics; Delegate to the Federation of Prosthodontic Organizations; Member of the Hoag Hospital 552 Board of Directors; Member of the USC Orange County Planning Council. For the Orange County Dental Society, I have served as Secretary, Senior Delegate, Chair of the Continuing Education Programs Committee, and five years on the Board of Directors. I received the Hoag Hospital Vin Jorgensen Award, the American College of Prosthodontists Distinguished Service Award, and the American College of Prosthodontists Dan Gordon Memorial Award.

I maintain fellowships in the International College of Prosthodontists, the American College of Prosthodontists, the Academy of Prosthodontics, the Pacific Coast Society for Prosthodontics, the Pierre Fauchard Academy, the Academy of Dentistry International, the International College of Dentists, and the American College of Dentists.

I have published numerous articles in the dental literature and my research at the L.A. Coroner's Office on the correlation of mercury in brain tissue with dental amalgam received a reference citation by the World Health Organization.

The following is a list of my involvement in professional organizations and associations during my career:

2002 – present Consultant, California Board of Dental Examiners.

1996 – present Member, U.S.C. School of Dentistry Board of Councilors

2010 – 2011 President, Academy of Prosthodontics.

2009 – 2010 President Elect, Academy of Prosthodontics.

2008 – 2009 Vice President, Academy of Prosthodontics.

2009 Chair, Academy of Prosthodontics Scientific Program.

2008 Chair, Academy of Prosthodontics Fellowship Committee.

- 1 **2007** Chair, Academy of Prosthodontics Policy Committee.
- 2 **2005-2008** Member, Council for the American Board of Prosthodontics.
- 3 **2004-2007** Member, American Dental Association Commission on Dental
- 4 Accreditation's Appeal Board.
- 5 **2001-2003** Member, Board of Directors Pierre Fauchard Academy, Southern
- 6 California Section.
- 7 **1998** The First American College of Prosthodontists Distinguished
- 8 Service Award.
- 9 **1997-2001** Chair, Dentistry Associates Board of Directors, U.S.C. School of
- 10 Dentistry
- 11 **1996** Chair, Academy of Prosthodontics 1996 Local Arrangements
- 12 Committee.
- 13 **1995-2000** Consultant, American Dental Association Council on Scientific
- 14 Affairs.
- 15 **1995-1997** Member, American College of Prosthodontists Peer Review
- 16 Committee.
- 17 **1995-1996** Member, Academy of Prosthodontics Oral Health and Dental
- 18 Practice Committee.
- 19 **1995-1996** Chair, Pacific Coast Society of Prosthodontists Membership
- 20 Committee.
- 21 **1995-1996** Chair, American Academy of Fixed Prosthodontics Table Clinics
- 22 Committee.
- 23 **1995-1996** Member, Pierre Fauchard Academy Credentials Committee.
- 24 **1995-1996** Member, American College of Prosthodontists Ad Hoc Implant
- 25 Program Subcommittee.
- 26 **1995** Member, American College of Prosthodontists Education
- 27 Foundation Scholarship Committee.
- 28 **1994-1998** Executive Councilor, Academy of Fixed Prosthodontics.
- 1994-1995** Member, International College of Prosthodontists Public and
- Professional Relations Committee.
- 1994** Chairman, Annual Program Planning Committee, American
- Academy of Fixed Prosthodontics.

- 1 1993-1997 Member, University of Southern California Orange County
- 2 Planning and Development Council.
- 3 1993-1996 Member, Board of Directors, University of Southern California
- 4 Dentistry Associates.
- 5 1993-1995 Chair, Academy of Prosthodontics Current Issues Committee.
- 6 1993-1994 Chair, Pacific Coast Society of Prosthodontists Policy
- 7 Committee.
- 8 1993 Recipient, Second Annual Vin Jorgensen Award for volunteer
- 9 service and commitment to Hoag Hospital through foundation
- 10 programs.
- 11 1993 Chair, Ticket Sales for the 1993 Christmas Carol Ball fund raiser
- 12 for Hoag Hospital.
- 13 1993 Member, American Dental Association OSHA Task Force.
- 14 1992-1995 Member, Academy of Prosthodontics Photography Committee
- 15 and History and Records Committee.
- 16 1992-1995 Board of Directors, Hoag Memorial Hospital Foundation 552
- 17 Club.
- 18 1992-1995 Associate Editor, *Journal of Prosthodontics*.
- 19 1992-1994 Member, American Dental Association Council on Dental
- 20 Research.
- 21 1992-1994 Chairman, American College of Prosthodontists Liaison to
- 22 the ADA House of Delegates Committee.
- 23 1992-1993 Member, American College of Prosthodontists Ad Hoc Chicago
- 24 Office Committee.
- 25 1992-1993 Chairman, American College of Prosthodontists Nominating
- 26 Committee.
- 27 1992-1993 President, Pacific Coast Society of Prosthodontists.
- 28 1992-1993 Member, Academy of Prosthodontics President's Advisory
- Committee.
- 1992 President, American College of Prosthodontists Education
- Foundation.
- 1991-1995 Member, Annual Program Planning Committee, American
- Academy of Fixed Prosthodontics.

- 1 1991-1992 Member, American College of Prosthodontists Ad Hoc
- 2 Committee for Strategic Planning.
- 3 1991-1992 President, American College of Prosthodontists.
- 4 1991-1992 Chair, Strategic Planning Committee, Pacific Coast Society of
- 5 Prosthodontists.
- 6 1991-1992 President-Elect, Pacific Coast Society of Prosthodontists.
- 7 1991 Member, American College of Prosthodontists Nominating
- 8 Committee
- 9 1991 Member, American College of Prosthodontists Ad Hoc
- 10 Committee to Review the Annual Session
- 11 1990-1993 Member, Academy of Prosthodontics Current Issues Committee.
- 12 1990-1991 President-Elect, American College of Prosthodontists
- 13 1990-1991 Member, Pacific Coast Society of Prosthodontists Policy
- 14 Committee
- 15 1990-1991 Chair, Pacific Coast Society of Prosthodontists Constitution &
- 16 By-Laws Committee
- 17 1990-1991 Vice-President, Pacific Coast Society of Prosthodontists.
- 18 1990 Chair, Pacific Coast Society of Prosthodontists Scientific
- 19 Program Committee.
- 20 1989-1992 Chairman, American College of Prosthodontists Education
- 21 Foundation Prosthodontic Nomenclature Committee.
- 22 1989-1992 Chairman, California Dental Association Council on Dental
- 23 Research and Developments.
- 24 1989-1992 Member, Federation of Prosthodontic Organizations Recruitment
- 25 and Retention Committee.
- 26 1989-1991 Chairman, American College of Prosthodontists Education
- 27 Foundation Ad Hoc Committee for Prosthodontic Education of
- 28 Health Professionals.
- 1989-1991 Chairman, Orange County Dental Society Program Committee.
- 1989-1991 Member, American College of Prosthodontists Education
- Foundation Constitution and By-Laws Committee.
- 1989-1991 Federation of Prosthodontic Organizations/American College of

- 1 Prosthodontists ADA Specialty Council.
- 2 **1989-1991** Chair, American College of Prosthodontists Budget Committee.
- 3 **1989-1990** Vice-President, American College of Prosthodontists.
- 4 **1988-1994** American College of Prosthodontists Delegate to the Federation
- 5 of Prosthodontic Organizations.
- 6 **1988-1993** Member, Board of Directors, American College of
- 7 Prosthodontists Education Foundation.
- 8 **1988-1991** Member, American College of Prosthodontists Peer Review
- 9 Committee.
- 10 **1988-1991** Member, Federation of Prosthodontic Organizations Nominating
- 11 Committee.
- 12 **1988-1990** Secretary, Pacific Coast Society of Prosthodontists.
- 13 **1988-1989** Secretary, American College of Prosthodontists.
- 14 **1988-1989** Member, Orange County Dental Society Budget and Finance
- 15 Committee.
- 16 **1988** Consultant, Academy of Denture Prosthetics Current Issues
- 17 Committee.
- 18 **1988** Pierre Fauchard Academy Nominations Committee.
- 19 **1987** Chairman, Local Arrangements Committee, Pacific Coast
- 20 Society of Prosthodontists 1987 Annual Meeting.
- 21 **1986-1989** Member, California Dental Association Council on Dental
- 22 Research and Developments.
- 23 **1986-1987** Member, American College of Prosthodontists Ad Hoc
- 24 Committee to Search for an Executive Director.
- 25 **1985-1988** Executive Councilor, American College of Prosthodontists.
- 26 **1985-1986** Member, American College of Prosthodontists Ad Hoc
- 27 Committee for the Evaluation of Specialty Listing by Non-
- 28 Specialists
- 1985-1986** Member, California Dental Association Interdisciplinary Affairs
- Committee.
- 1985** Member, California Dental Association Reference Committee on
- Dental Care for the 1985 House of Delegates.

- 1 1984-1992 Pacific Coast Society of Prosthodontists Annual Session
- 2 Registration.
- 3 1984-1989 Editor, Pacific Coast Society of Prosthodontists Newsletter.
- 4 1984-1988 Chairman, American College of Prosthodontists National Peer
- 5 Review Committee.
- 6 1984-1987 Executive Councilor, Pacific Coast Society of Prosthodontists.
- 7 1984-1987 Member, Federation of Prosthodontic Organizations Oral Health
- 8 Committee.
- 9 1984-1986 Member, Orange County Dental Society Budget, Audit, and
- 10 Finance Committee
- 11 1984-1986 Member, American College of Prosthodontists Ad Hoc
- 12 Committee for Computer Utilization.
- 13 1984-1985 President, American College of Prosthodontists California
- 14 Section.
- 15 1984 Chairman, Committee on Rules and Order, California Dental
- 16 Association House of Delegates.
- 17 1984 Senior Orange County Dental Society Delegate to the California
- 18 Dental Association House of Delegates.
- 19 1983-1985 Member, Constitution and By-Laws Committee, Pacific Coast
- 20 Society of Prosthodontists.
- 21 1983-1984 Vice President, American College of Prosthodontists California
- 22 Section.
- 23 1983 Member – Delta Dental Plan of California Superiority of Service
- 24 Panel.
- 25 1982-1988 Chairman, Dental Care Committee, Orange County Dental
- 26 Society.
- 27 1982-1987 Delegate to the California Dental Association House of
- 28 Delegates.
- 1982-1983 Liaison for the Orange County Dental Society to the Auxiliary of
- the Orange County Dental Society.
- 1981-1985 Member, Orange County Dental Society Public Relations
- Committee.
- 1981-1983 Secretary, American College of Prosthodontists California

Section.

1981-1982 West Coast Spokesperson, Dental Gold Institute.

1981-1982 Secretary, Orange County Dental Society.

1981 Chairman, Prosthodontic Peer Review Committee, American College of Prosthodontists California Section.

1980-1986 Chairman, Prosthetic Dental Care Programs Committee, American College of Prosthodontists.

1980 Board Member at Large, Orange County Dental Society.

1979-1983 Faculty, Odontic Seminar, U.S.C. School of Dentistry.

1979-1980 Chairman, Program Committee, Orange County Dental Society.

1977-1979 Chairman, Continuing Education Committee, Orange County Dental Society.

1976-1979 Member, Continuing Education Committee, American College of Prosthodontists.

III. INFORMATION RELIED UPON

The documents and references I considered in forming my opinions are listed below. I also relied upon my experience, education and the knowledge I have acquired in my 42 years of involvement in the dental industry.

I reviewed the documents and things that have been produced during discovery with Bates numbers KDA-001500 through KDA-002467. I found the following videos and documents, cited in this report, to be supportive of my opinions along with many of the other articles and documents reviewed:

Dorland's Illustrated Medical Dictionary, 32nd Edition, 2012.

Nikolaos Tsiggos, D.D.S, Ph.D., et al.: Association between self-reported bruxism activity and occurrence of dental attrition, abfraction, and occlusal pits on natural teeth. *Journal of prosthetic dentistry*, Jul 2008.

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1 Emily R. Tolley, D.D.S.: The Efficacy of the Bitestrip® in Determining
2 Patients Awareness of Nocturnal Bruxism. Thesis submitted to the School of
3 Dentistry, West Virginia University, 2007.

4 Robin A. Carden: A Changing Direction in Dentistry: Full-Contour
5 Zirconia. *Journal of Dental Technology*, February 2011.

6 Yasuhiro Ono, D.D.S., et al.: The Effects of Sleep Bruxism On Periodontal
7 Sensation and Tooth Displacement in the Molar Region. *The Journal of*
8 *Cranio-mandibular Practice*, Oct. 2008.

9 Christine Schneider, et al.: Maladaptive Coping Strategies in Patients with
10 Bruxism Compared to Non-Bruxing Controls. *International Journal of Behavioral*
11 *Medicine* 4: 257-61, 2007

12 Takeshi Suganuma, D.D.S., Ph.D., et al.: The Effect of Bruxism On
13 Periodontal Sensation in the Molar Region: A Pilot Study. *The Journal of*
14 *Prosthetic Dentistry*, July 2007

15 Omar Franklin Molina D.D.S., M.S., et al.: A Clinical Study of Specific
16 Signs and Symptoms of CMD in Bruxers Classified by the Degree of Severity.
17 *The Journal of Cranio-mandibular Practice*, January 1999.

18
19 The following documents available online:

20 Robin A. Carden: "BruxZir: Virtually Bulletproof" available at
21 [http://www.glidewelldental.com/dentist/education/bruxzir-virtually-](http://www.glidewelldental.com/dentist/education/bruxzir-virtually-bulletproof.aspx)
22 [bulletproof.aspx](http://www.glidewelldental.com/dentist/education/bruxzir-virtually-bulletproof.aspx) (Bates number KDA-002222-002226).

23 "Metal-Free Restoration Guide" available at
24 <http://www.assuredentallabinc.com/prep.html> (Bates number KDA-002172-
25 002173).

26 "Axis Dental Milling: Bruxzir Full Contour Dental Milling" available at
27 <https://www.axisdentalmilling.com/bruxzir.html> (Bates number KDA-002174-
28 002175).

1 “All Ceramic: All Zirconia for Bruxers” available at
2 <http://www.chinadentaloutsourcing.com/p-ceramic-bruxer.html> (Bates number
3 KDA-002237-002240).

4 “BruxZir®: Crown Dental Studio” available at
5 <http://www.crowndentalstudio.com/BruxZir.html> (Bates number KDA-002242-
6 002244).

7 “Infinity Dental Laboratory: Help your dental lab grow!” available at
8 <http://www.infinitylaboratory.com/5073/5094.html> (Bates number KDA-002341).

9 “Keller Laboratories: BruxZir®” available at
10 <http://www.kellerlab.com/193/products/bruxzir.php> (Bates number KDA-002343-
11 002344).

12 “Showcase Dental Laboratories: News” available at
13 <http://www.showcasedental.com/about/events/html> (Bates number KDA-002361).

14 “Fixed Cosmetics RX” available at <http://www.mascolaesthetics.com>
15 (Bates number KDA-002444).

16 “Bruxer” available at <http://yorkdentallab.com/fixed/bruxzer> (Bates number
17 KDA-002445).

18 “Z-Brux Crowns: Bruxzir: Solid Zirconia – Barth Dental Lab” available at
19 <http://www.barthlab.com/dental-lab-products/z-brux-crown/> (Bates number KDA-
20 002446-002447).

21
22 Videos available online which have been produced with the following
23 Bates numbers: KDA-002460 through KDA-002467. These include:

24 “Introduction to BruxZir Total Zirconia” uploaded Oct 20, 2009 by
25 glidewellldental and available at
26 http://www.youtube.com/watch?v=tUpp_DOY4Vw&feature=plcp.

27 ///

28 ///

1 “BruxZir® Solid Zirconia Patient Education” uploaded on Jul 24, 2012 by
2 glidewelldental and available at

3 http://www.youtube.com/watch?v=D4taHSdbP_w&feature=plcp.

4 “Clinical Case: The Pursuit of BruxZir® Esthetics: Anterior Crowns #8 &
5 #9” uploaded on Aug 22, 2012 by glidewelldental and available at

6 <http://www.youtube.com/watch?v=GzKZbiOXio0&feature=plcp>.

7 “Hammer Test: BruxZir® vs PFM” uploaded on Dec 23, 2010 by
8 glidewelldental and available at

9 <http://www.youtube.com/watch?v=2ZRfQK6Ipb0&feature=plcp>.

10 “BruxZir e.max comparison” uploaded May 13, 2011 by greendental and
11 available at <http://www.youtube.com/watch?v=MXW6WCvV0QQ>.

12 “BruxZir Total Zirconia Crown” uploaded Jan 31, 2011 by greendental and
13 available at <http://www.youtube.com/watch?v=83Csr1rNcCI>.

14 “How To Adjust the Bruxzir Crown” uploaded Feb 18, 2011 by RDentLab
15 and available at <http://www.youtube.com/watch?v=sTTwU1LDvjU>.

16 “BruxZir Removal” uploaded Jul 1, 2012 by artisticdental and available at
17 <http://www.youtube.com/watch?v=zzcPbCciiuA>.

18 19 **IV. OPINIONS TO BE EXPRESSED**

20 Within the dental profession and related fields, the term “bruxism” is used
21 to describe a condition in which a patient grinds their teeth, or bruxes their teeth.
22 These patients are routinely referred to as bruxers. One challenge in treating these
23 patients is providing a crown or bridge that is strong enough to prevent
24 catastrophic fracture. In these instances, an all zirconia restoration can be useful
25 due to its high strength. However, restorations made entirely of zirconia have
26 disadvantages that make them undesirable for patients other than bruxers. This
27 has resulted in a strong correlation in the dental industry between dental crowns
28 made entirely of zirconia and bruxers.

1 In my opinion, the following are generally accepted facts in the dental
2 profession:

3 A. A bruxer is a generic term used to describe a person with the condition
4 of bruxism.

5 B. The mark BRUXZIR is phonetically equivalent to the term "bruxer."

6 C. The primary indication for an all zirconia crown, or bruxer crown, is
7 patients with bruxism.

8 D. Dentists and other professionals in the dental industry refer to an all
9 zirconia crown as a "bruxer crown" or alternatively a "bruxzir crown."

10 **A. A bruxer is a generic term used to describe a person with the condition**
11 **of bruxism.**

12 According to Dorland's Illustrated Medical Dictionary (32nd Edition, 2012),
13 bruxism is defined as "involuntary, nonfunctional, rhythmic, or spasmodic
14 gnashing, grinding, and clenching of teeth." Additionally, "brux" is defined as
15 "to grind the teeth rhythmically or spasmodically." Within the dental profession a
16 bruxer is known as a patient with the condition of bruxism. During my
17 preparation for this report I reviewed many scholarly articles referring to
18 "bruxism" and "bruxers" illustrating the generic nature of these terms. These are
19 words that are used routinely and frequently within the dental profession and have
20 been so throughout my 42 years in dentistry.

21 The following examples are illustrative of the frequent generic use of
22 "bruxer" and "bruxism." An article titled "Association Between Self-Reported
23 Bruxism Activity and Occurrence of Dental Attrition, Abfraction, and Occlusal
24 Pits on Natural Teeth" which was published in the *Journal of Prosthetic Dentistry*
25 in July 2008 reports on a study in which the participants were divided into groups
26 of bruxers and non-bruxers. The reported clinical implication from the study is
27 that "the use of a bruxism awareness questionnaire . . . may be used to
28 *differentiate self-reported bruxers from nonbruxer subjects.*" (Emphasis added).

1 All dental professionals would readily understand the meaning of the term bruxer
2 and nonbruxer used here.

3 Another example comes from the thesis submitted by Emily R. Tolley,
4 DDS for her Master of Science in Prosthodontics degree from West Virginia
5 University. The thesis is titled "The Efficacy of the BiteStrip in Determining
6 Patients Awareness of Nocturnal Bruxism." It concludes that "the BiteStrip
7 demonstrated 70% of the patients *registered as bruxers*. A fairly high percentage
8 of *those who scored as bruxers* with the BiteStrip® were unaware that they did
9 brux." (Emphasis added). Once again, this terminology is used because it is
10 readily understood by dental professionals.

11 In another example, Robin A. Carden, the senior director of research and
12 development at Glidewell Laboratories, published an article in the *Journal of*
13 *Dental Technology* in February 2011 titled "A Changing Direction in Dentistry:
14 Full-Contour Zirconia." Speaking of full-contour zirconia restorations, Mr.
15 Carden states, "Primary candidates include bruxers and grinders who do not
16 desire cast gold or metal occlusal PFM restorations."

17 Additionally, many studies on bruxism divide test subjects into different
18 groups and differentiate them as being bruxers or non-bruxers. Examples include:
19 "The Effect of Bruxism on Periodontal Sensation in the Molar Region: A Pilot
20 Study" by Takeshi Suganuma, et al. which was published in *The Journal of*
21 *Prosthetic Dentistry* in July of 2007; "Maladaptive Coping Strategies in Patients
22 with Bruxism Compared to Non-Bruxing Controls" by Christine Schneider, et al.
23 which was published in *International Journal of Behavioral Medicine* in 2007;
24 and "Effects of Sleep Bruxism on Periodontal Sensation and Tooth Displacement
25 in the Molar Region" by Yasuhiro Ono, et al. which was published in *The Journal*
26 *of Craniomandibular Practice* in October 2008. Bruxers can even be categorized
27 based on the severity of the bruxism as was done in a study by Omar Franklin
28 Molina D.D.S. et al. titled "A Clinical Study of Specific Signs and Symptoms of

1 CMD in Bruxers Classified by the Degree of Severity” which was published in
 2 *The Journal of Craniomandibular Practice* in 1999. In each of these examples,
 3 the term “bruxer” is used generically and throughout the study to identify a group
 4 of subjects that suffers from the condition of bruxism.

5 These are just a few representative examples. I reviewed many more and
 6 have personal knowledge of the use of these terms in my own dental practice,
 7 education and experience. It is my opinion that the term bruxer is a generic term
 8 to refer to patients with the condition of bruxism.

9 **B. The mark BRUXZIR is phonetically equivalent to the term “bruxer.”**

10 The mark BRUXZIR is pronounced equivalent to the term “bruxer.” It is
 11 evident from the mark BRUXZIR that the first syllable “brux” is similar to
 12 bruxism or bruxer and should be pronounced the same. Likewise, it is evident
 13 that the second syllable “zir” comes from zirconia, which refers to zirconium
 14 oxide, the material from which the BRUXZIR product is made. Thus BRUXZIR
 15 is pronounced by combining the first syllable of “bruxism” with the first syllable
 16 of “zirconia.” This results in a mark that is pronounced the same as “bruxer.”

17 The conclusion that BRUXZIR is pronounced the same as bruxer is
 18 demonstrated in the promotional videos which Glidewell has made available
 19 online through their channel on YouTube.com. In these videos, the mark
 20 BRUXZIR is verbalized many times, and in each instance, it is pronounced as a
 21 phonetic equivalent to the word “bruxer.” It is my opinion that the trademark
 22 BRUXZIR is phonetically equivalent to the word “bruxer.”

23 **C. The indication for an all zirconia crown, or bruxer crown, is patients**
 24 **with bruxism.**

25 Bruxer crowns, made entirely of zirconia, are the strongest crowns
 26 available in dentistry, and therefore the treatment of choice for patients who are
 27 bruxers. In contrast to the advantage of strength, the other properties of zirconia
 28 are a detriment. Bruxer crowns are very opaque and unsuitable for the anterior

1 teeth. The extreme hardness makes them difficult to remove if a misfit is
2 discovered after cementation, or to adjust the occlusion, or to cut through for
3 endodontic access.

4 Bruxers will put up with the opacity of zirconia to get the needed strength.
5 However, non bruxers do not need the strength and they prefer the more
6 translucent restorative materials.

7 To reiterate, there are significant disadvantages to the use of zirconia. 1)
8 The opacity of the material looks very different from a real tooth. While zirconia
9 is more aesthetic than a gold crown, it is less aesthetic than any other type of
10 crown. 2) Due to its strength, a bruxer crown is extremely hard to remove which
11 adds complications when removal becomes necessary. 3) The hardness also
12 creates difficulty for endodontic access during a root canal procedure.

13 In my review of literature on the subject, the indication given for a bruxer
14 crown is "for bruxers and grinders." For example, on Glidewell Laboratories
15 website, glidewell.com, there is an article titled, "BruxZir: Virtually Bulletproof"
16 which states, "These innovations led to the development of BruxZir Solid
17 Zirconia, which is indicated for bruxers and grinders as an esthetic posterior
18 alternative to metal occlusal PFMs or cast-metal restorations." No other
19 indications are mentioned. Also, Barth Dental Laboratories advertises a solid
20 zirconia crown they call the Z-Brux Crown in which they state, "Chip resistant
21 quality makes Z-Brux *ideal for bruxers.*" (Emphasis added).

22 Other examples include: Keller Laboratories website for a BruxZir crown
23 stating "Ideal for bruxers & grinders who have destroyed other restorations."
24 (<http://www.kellerlab.com/193/products/bruxzir.php>); Axis Dental Milling states
25 on their website, "The chip proof durability of BruxZir is ideal for bruxers who
26 have broken natural teeth or previous PFM restorations."
27 (<https://www.axisdentalmilling.com/bruxzir.html>); Crown Dental Studio states,
28 "Ideal for bruxers & grinders who have destroyed other restorations"

(<http://www.crowndentalstudio.com/bruxzir.html>); Assured Dental Lab states, Patient a grinder or Bruxer: Use IPS e.max Bruxer crown.” (<http://www.assuredentallabinc.com/prep.html>). These are, once again, only representative examples as there are many throughout the dental literature.

In my opinion the only indication for an all zirconia crown is bruxers -- patients with the condition of bruxism, along with the rare patient with potential allergies to other restorative materials. When the level of hardness that zirconia provides is not necessary, there are other options available that are more advantageous.

D. Dentists and other professionals in the dental profession refer to an all zirconia crown as a “bruxer crown” or alternatively a “bruxzir crown.”

Due to their association with the treatment of bruxers, a crown made entirely with zirconia is referred to by dentists and other dental professionals as a bruxer crown, or alternatively a bruxzir crown. In reviewing many materials that are found online, advertisements by Glidewell Laboratories, Keating Dental Arts, and other labs, as well as prescription orders that have been placed with dental labs, I found numerous examples of dental professionals using the term bruxer crown, or alternatively bruxzir crown, to refer generically to a crown made of all zirconia. As an example, RDent Dental Laboratory, Inc. located in Tennessee has uploaded an informational video on YouTube.com entitled “How to Adjust the Bruxzir Crown.” In this video, a dentist refers to an all zirconia crown and states, “some laboratories call it bruxer crown, we call it the RBruX crown.” As discussed above, the terms bruxer and bruxzir sound exactly the same, so one cannot distinguish between the two when heard in video or conversation. This has led to some dental professionals using the spelling “bruxzir” while others spell the term “bruxer” when referring to the generic term bruxer crown.

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1 Through their advertisement and promotional material, Glidewell
2 Laboratories has reinforced the nomenclature for an all zirconia crown being a
3 bruxzir crown, or alternatively as a phonetic equivalent, a bruxer crown. For
4 example, in their promotional video entitled "Introduction to BruxZir Total
5 Zirconia," they start by stating, "Bruxzir is a 100% zirconia crown." This
6 indicates that bruxzir is a type of product and does not identify a particular
7 manufacturer. Later in the video a bruxzir crown is compared to a metal occlusal
8 PFM crown and a gold cast crown. These are generic names for types of crowns
9 with which all dentists are very familiar. The video discusses the disadvantages
10 of these crowns and then states, "Well enter bruxzir. Let's take a look at how
11 bruxzir fits into all this." Once again there is no indication of a particular
12 manufacturer or that the product is called anything other than a bruxzir crown.
13 Later, the video compares a bruxzir crown to other crowns that are shown in a
14 patient's mouth. It states, "You can see in this case that the bruxzir crown blends
15 in reasonably well with the adjacent teeth. You can see the gold crown behind it
16 stands out a lot more and even the PFM across from it does not blend in
17 perfectly." Glidewell is using the term bruxzir crown alongside other generic
18 terms for types of crowns such as gold crowns and PFMs. Throughout all of
19 Glidewell's videos that discuss and promote the bruxzir crown, there is consistent
20 use of the term bruxzir referring generically to a bruxzir crown, which sounds
21 identical to a "bruxer crown," or a crown made to treat bruxers.

22 Glidewell's print and online advertisements and promotional material also
23 describe bruxzir as a type of product. Even when the ® symbol is used, BruxZir
24 is still identified as a type of product and does not identify a manufacturer.
25 Likewise, many other labs use "bruxer" or some variation, as the name of their all
26 zirconia products. Examples include: York Dental Lab offers a "Bruxer" crown;
27 Barth Dental Lab offers a "Z-Brux" crown; Mascola Esthetics Dental Lab offers a
28 "Xtreme Bruxer"; Showcase Dental Lab previously offered a "Zir-Bruxer

1 Crown”; RDent Laboratory has offered a “R-Brux crown”; Infinity Dental Lab
2 has offered a “Bruxer Crown”; Assured Dental Lab recommends “IPS e.max
3 Bruxer crown” when a patient is a grinder or Bruxer; and China Dental
4 Outsourcing, a U.S. company, offers an “All Zirconia for Bruxers.” Each is an
5 example of the dental industry using the term bruxer crown to denote a type of
6 product and not a specific brand.

7 Additionally, I reviewed a number of laboratory orders sent to Keating
8 Dental Arts in which the dentist ordered a “bruxzir,” “bruxir,” “bruxzer,” or
9 “bruxer” crown. This is further evidence that these alternate spellings are all
10 generic variations for a bruxer crown. When a dentist orders a product from a
11 dental lab, he or she must select the prescription form for that lab from many
12 different prescription forms that are available. Dentists often use more than one
13 lab for the full range of services they offer which requires them to ensure they are
14 selecting the prescription form for the lab from which they intend to order. These
15 prescription forms often vary greatly in color, physical orientation, organization,
16 and/or size. Dentists know there are different forms and, as part of their dental
17 practice, know they must select the correct form to get the product they desire.
18 This makes it unlikely that a dentist would intend to order a product from
19 Glidewell, for example, but fill out Keating Dental Arts’ prescription form. Thus,
20 a dentist using an alternative spelling such as “bruxzir” or “bruxzer” when they
21 order a KDZ Bruxer would indicate a generic use of that term and the spelling
22 used.

23 In my opinion, dentists and other professionals in the dental profession
24 refer to an all zirconia crown as a “bruxer crown” or alternatively a “bruxzir
25 crown.”

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1 **V. SUPPLEMENTATION AND REBUTTAL**

2 I understand discovery is ongoing and I reserve the right to supplement this
3 report and to offer opinions in my area of competence on the additional
4 information. And to the extent that the plaintiff offers any opinions in my area of
5 competence to which I disagree, I expect I may comment on these opinions. In
6 addition, to the extent subsequent developments may have a bearing on my
7 opinions; I expect I may supplement this report to take those developments into
8 consideration.

9
10 **VI. PRIOR TESTIMONY**

11 In the preceding four years I have testified in depositions or in court on the
12 following:

13 Meridith Riley v Ronald Rosenblatt, DDS. Superior Court, County of Los
14 Angeles, Case # SC109670. My deposition was on October 28, 2011. I was an
15 expert for the plaintiff. Dental malpractice case

16 Ingrid Valdez & Barry Cosgrove v Sherri Worth, DDS. Arbitration at
17 Judicate West. Judgment in Conformity in Superior Court, County of Orange.
18 Case #30-2010-00348533. I testified at the arbitration hearing in November,
19 2011. My second volume of deposition was on October 21, 2011.

20
21
22 **VII. ARTICLES AND PAPERS**

23 •Eggleston DW: Advantages and use of the remount for fixed
24 prosthodontics. *Journal of Prosthetic Dentistry* 43:627-33, 1980.

25 •Eggleston DW: The interrelationship of stress and degenerative diseases.
26 *Journal of Prosthetic Dentistry* 44:541-4, 1980.

27 •Eggleston DW: Biocompatibility of base metal alloys for dental
28 restorations. *Orange County Dental Society Impressions* 1:6-7, February, 1981.

1 •Eggleston DW: CDS procedure codes for casting alloys for porcelain
2 veneering. *Orange County Dental Society Impressions* 3:11-5, September, 1982.

3 •Eggleston DW: Preferred Provider Organizations (P.P.O's). *Orange*
4 *County Dental Society Impressions* 5:8-10, April, 1984; *The American College of*
5 *Prosthodontists Newsletter* 12:2-3, Spring, 1984.

6 •Eggleston DW: Effect of dental amalgam and nickel alloys on T-
7 lymphocytes: Preliminary report. *Journal of Prosthetic Dentistry* 51:617-23, May,
8 1984.

9 •Sullivan SG, Eggleston DW, Martinoff JT, Kroening RJ: The blind
10 measurement of evoked electrical conductivity on the lung acupuncture points in
11 healthy individuals and confirmed lung cancer patients: a research evaluation.
12 *American Journal of Acupuncture* 13:261-6, September, 1985.

13 •Strauss FG, Eggleston DW: IgA nephropathy associated with dental nickel
14 alloy sensitization. *American Journal of Nephrology*, 5:395-7, 1985.

15 •Eggleston DW, Nylander M, Suffin SC, Martinoff JT, Rieders MF:
16 Correlation of dental amalgam with mercury in brain tissue. *Journal of the*
17 *California Dental Association* 15:39, 1987. *Journal of Prosthetic Dentistry*
18 58:704-707, December, 1987.

19 •Eggleston DW: A sign of the times, transition of dental infection control
20 techniques. *Journal of the California Dental Association* 17:44-5, August, 1989.

21 •Eggleston DW: Dental Amalgam: A Review of the Literature. *The*
22 *Compendium of Continuing Education in Dentistry*, 10(9):500-5, September,
23 1989.

24 •Nylander M, Friberg L, Eggleston D, Bjorkman L: Mercury accumulation
25 in tissues from dental staff and controls in relation to exposure. *Swedish Dental*
26 *Journal* 13(6):235-43, November-December, 1989.

27 •Eggleston DW: Caution on Amalgam Issue. *CDA Update* 3(1):2,12,
28 January 15, 1991.

1 •Eggleston DW: Medical Waste Management in a Dental Office. *Dentistry*
2 *Today* 11(6):38-9, August, 1992.

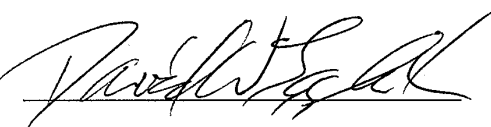
3 •Eggleston DW: Improved Laboratory Results for Fixed Restorations Using
4 Sequential Tooth Preparation. *Journal of Prosthodontics*, 9:47-49, March, 2000.

5 •Eggleston DW: "Gummy Smiles," Biologic Width and Laser Surgery: A
6 Patient Study. *Orange County Dental Society Impressions*. 29-35 March/April,
7 2012.

8
9 **VIII. COMPENSATION**

10 I am being compensated for the time I have spent working on this matter at
11 my standard rate of \$500 per hour during office hours and during deposition
12 testimony, and \$350 per hour to review materials and during hours outside of my
13 normal office hours.

14
15 I declare under the penalty of perjury that the above is true and correct.
16 Dated: September 14, 2012 at Irwin, California.

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20 Dr. David W. Eggleston
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24 13955313
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PROOF OF SERVICE

I am a citizen of the United States of America and I am employed in Irvine, California. I am over the age of 18 and not a party to the within action. My business address is 2040 Main Street, Fourteenth Floor, Irvine, California. On September 15, 2012, I caused the within **EXPERT REPORT OF DR. DAVID W. EGGLESTON** to be served on the parties or their counsel shown below, by placing it in a sealed envelope addressed as follows:

VIA Email and First Class Mail

Leonard Tachner, Esq.
LEONARD TACHNER, A Professionals Law Corp.
17961 Sky Park Circle, Suite 38-E
Irvine, CA 92614-6364
Email: ltachner@aol.com

I declare that I am employed in the office of a member of the bar of this Court at whose direction the service was made.

Executed on September 15, 2012 at Irvine, California.


Peter Toller